

ABSTRACT:

The invention relates to an encoding method for the compression of a video sequence. Said method, using a three-dimensional wavelet transform, is based on a hierarchical subband coding process in which the subbands to be encoded are scanned in an order that preserves the initial subband structure of the 3D wavelet transform. According to the invention, a temporal (resp. spatial) scalability is obtained by performing a motion estimation at each temporal resolution level (resp. at the highest spatial resolution level), and only the part of the estimated motion vectors necessary to reconstruct any given temporal (resp. spatial) resolution level is then encoded and put in the bitstream together with the bits encoding the wavelet coefficients at this given temporal (resp. spatial) level, said insertion in the bitstream being done before encoding texture coefficients at the same temporal (resp. spatial) level. Such a solution avoids to encode and send all the motion vector fields in the bitstream, which would be a drawback when a low bitrate is targeted and the receiver only wants a reduced frame rate or spatial resolution.